

**Abstract**

An optical amplifier module contains at least one optical amplifier. The module includes an internal housing having an outer dimension substantially equal to an outer dimension of an internal fiber splice housing of an undersea optical fiber cable joint. The internal housing includes a pair of opposing end faces each having a retaining element for retaining the internal housing within an outer housing of the undersea optical fiber cable joint. The internal housing also includes a sidewall interconnecting the opposing end faces, which extends between the opposing end faces in a longitudinal direction. The sidewall includes a receptacle portion having a plurality of thru-holes each being sized to receive a passive optical component employed in an optical amplifier.